APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/667,203	09/18/2003	Foster D. Hinshaw	3336.1008-001	7168

21005 7590 04/07/2006		EXAMINER	
HAMILTON, BROOK, SMITH & REYNOLDS, P.C.		LOVEL, KIMBERLY M	
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P.O. BOX 9133		ART UNIT	PAPER NUMBER
CONCORD, MA 01742-9133		2167	

DATE MAILED: 04/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/667,203	HINSHAW ET AL.
	Examiner	Art Unit
	Kimberly Lovel	2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 September 2003*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-14* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *15 March 2004* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *9/18/03*.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-14 are pending.

Information Disclosure Statement

2.   The information disclosure statements (IDS) submitted on 3/15/2004 and

6/23/2004 were filed after the mailing date of the application on 9/18/2003. The

submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the

information disclosure statement is being considered by the examiner.

Drawings

3.   The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4)

because reference character "336" has been used to designate both Backup/Recovery

and PSDP Prep. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are

required in reply to the Office action to avoid abandonment of the application. Any

amended replacement drawing sheet should include all of the figures appearing on the

immediate prior version of the sheet, even if only one figure is being amended. Each

drawing sheet submitted after the filing date of an application must be labeled in the top

margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If

the changes are not accepted by the examiner, the applicant will be notified and

informed of any required corrective action in the next Office action. The objection to the

drawings will not be held in abeyance.

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig 1, item 16; Fig 3, items 301, 302, 304, 306, 308, 310, 312, 314, 322, 324, 330, 334, 336 and 338; and Fig 5, item 54 (page 22, line 26 of the specification mentions the item as 504) . Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

4.   Claims 1, 9 and 11 are objected to because of the following informalities:

Claim 1 recites the limitation "the JPU" in line 15. There is insufficient antecedent basis for this limitation in the claim

Claim 9 recites the limitation "the overflow filter" in line 1. There is insufficient antecedent basis for this limitation in the claim; and

Claim 11 fails to end in a period.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over US

Patent No 6,434,649 to Baker et al in view of US PGPub 2005/0154705 to Zwiegincew

et al.

Referring to claim 1, Baker et al disclose a Data Streamer. In particular, Baker

et al disclose a Programmable Streaming Data Processor (PSDP) which is arranged to

perform primitive functions directly on data received from a streaming data interface

(see abstract; column 1, lines 48-58; and Fig 1A, item 100 – the multimedia processor is

considered to represent the programmable streaming data processor since it comprises

of the same components and is a data processor for streaming which can be

programmed), PSDP performing initial processing on a set of data comprising:

a streaming data interface, for receiving data from a streaming data source (see

column 5, lines 59-68 and Fig 1, items 122 and 132);

a streaming interface First In First Out (FIFO), arranged for temporarily storing

streaming data from the streaming data interface (see column 17, lines 25-45; column

18, lines 13-22; and Fig 7, item 716 – the interface uses a first-in-first-out buffer;

according to the 5th Edition of Microsoft's Computer Dictionary, the definition of a buffer

states "a region of memory reserved for use as an intermediate repository in which data

is temporarily held while waiting to be transferred between two locations or devices");

a data engine, arranged to receive output data from the streaming interface FIFO

(see column 20, lines 21-23 and Fig 1A, item 112 – the data transfer switch interface is

considered to represent the *data engine*), the data engine for determining field

boundaries therein, and for processing fields to select one or more fields to be output

tuples, the data engine also containing logic to determine whether an output tuple is to

be selected for further processing by additional processing Job Processing Units (see

column 30, lines 6-10 – the data is either returned for further processing or it is retrieved

from a memory location which is considered to represent outputting the tuple), and for

asserting a use/lose decision value according to that determination;

a tuple generator for assembling fields into the output tuple, and if the use/lose

decision value indicates that such output tuple is to be discarded, for preventing such

tuple set from being transferred from the output FIFO to the memory of the JPU (see

column 30, lines 11-21); and

an output First In First Out (FIFO) device, for forming tuples and temporarily

storing them prior to conditionally forwarding them to the Job Processing Unit (see

column 30, lines 22-32).

Baker et al disclose a Programmable Streaming Data Processor (PSDP)

which is arranged to perform primitive functions directly on data received from a

streaming data interface, however, Baker et al fail to explicitly teach the further limitation

of the data engine wherein a use/lose decision value is utilized and the further limitation

of the tuple generator assembling fields into the output tuple, and if the use/lose

decision value indicates that such output tuple is to be discarded, for preventing such

tuple set from being transferred. Zwiegincew et al disclose a method for manipulating

data including the further limitations of the data engine wherein a use/lose decision

value is utilized (see [0029] and [0058] – the SQL generator is considered to represent

the *data engine*) and the further limitation of the tuple generator assembling fields into

the output tuple, and if the use/lose decision value indicates that such output tuple is to

be discarded, for preventing such tuple set from being transferred (see [0058]).

It would have been obvious to one of ordinary skill in the art at the time the

invention was made to Zwiegincew et al's method of manipulating data as a

subcomponent to Baker et al's Data Streamer. One would have been motivated to do

so to inorder to improve data movement (Baker et al: see column 1, lines 49-67).

Referring to claim 2, the combination of Baker et al and Zwiegincew et al (hereafter Baker/Zwiegincew) discloses an apparatus as in claim 1 wherein the use/lose value indicates a result from logic processing of fields read from the streaming data interface (see Baker et al: see column 17, line 52 – column 18, line 12).

Referring to claim 3, Baker/Zwiegincew discloses an apparatus as in claim 1 wherein the use/lose decision value indicates a result from Transaction Identifier (TID) processing (Zwiegincew et al: see [0068] – item IDs is considered to represent the Transaction Identifier; and Baker et al: see column 29, lines 63-65).

Referring to claim 4, Baker/Zwiegincew discloses an apparatus as in claim 3 wherein the TID processing and data engine logic execute in parallel (Baker et al: see column 5, lines 11-15).

Referring to claim 5, Baker/Zwiegincew discloses an apparatus as in claim 1 wherein the output tuple is greater in length than an expected predetermined size, and the use/lose decision value is then used to set an overflow field in the output tuple ().

Referring to claim 6, Baker/Zwiegincew discloses an apparatus as in claim 5 wherein the use/lose decision value is not asserted when a buffer local to the programmable data streaming processor is full; and means for appending an overflow filter bit to a tuple that indicates a transfer of a tuple that should be ignored (Baker et al: see column 18, lines 56-64).

Referring to claim 7, Baker/Zwiegincew discloses an apparatus as in claim 1 additionally comprising: a Direct Memory Access (DMA) interface, coupled to the output

FIFO, to provide direct access to a memory in the Job Processing Unit (Baker et al: see column 6, lines 24-25 and column 19, lines 15-25).

Referring to claim 8, Baker/Zwiegincew discloses an apparatus as in claim 1 wherein the use/lose value is used to reset the output FIFO write pointer so any prior fields in the present tuple are discarded (Baker et al: see column 12, lines 18-34 – after the data is written, it is considered to be removed from the temporary storage of the buffer, therefore being deleted).

Referring to claim 9, Baker/Zwiegincew discloses an apparatus as in claim 1 wherein the overflow filter bit is inserted in a length field appended to record fragments (Baker et al: see column 34, lines 56-62).

Referring to claim 10, Baker/Zwiegincew discloses an apparatus as in claim 1 wherein an invalid field is appended to a tuple to indicate the results of transaction ID processing (Baker et al: see column 12, line 62 – column 13, line 16).

Referring to claim 11, Baker/Zwiegincew discloses an apparatus as in claim 10 wherein the invalid field indicates that the TID mode marks return tuple (Baker et al: see column 12, line 62 – column 13, line 16).

Referring to claim 12, Baker/Zwiegincew discloses an apparatus as in claim 10 wherein the invalid field indicates that the tuple should not have been returned but the output FIFO overflowed (Baker et al: see column 31, lines 10-22 and column 34, lines 56-62).

Referring to claim 13, Baker/Zwiegincew discloses an apparatus as in claim 1 further comprising: a register reflecting the final PSDP status which is read by the CPU

to identify whether any overflow or TID status bits are set in any of the tuples (Baker et

al: see column 29, line 63 – column 30, line 21).

Referring to claim 14, Baker/Zwiegincew discloses an apparatus as in claim 1

wherein the use/lose decision value represents DeMorgan's Law reduction of multiple

instructions (Baker et al: see column 5, lines 25-34).

Contact Information

7.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kimberly Lovel whose telephone number is (571) 272-2750. The examiner can normally be reached on 8:00 - 4:30.
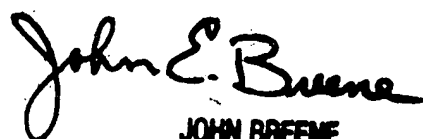
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kimberly Lovel
Examiner
Art Unit 2167

kml
31 March 2006

JOHN BREENE
SUPERVISORY PATENT EXAMINER
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